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(54) POWER ACTIVE FILTER HAVING UNINTERRUPTIBLE POWER SUPPLY FUNCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To unify both the functions of an active filter and a UPS with a control system by a method wherein, in a normal state, a fundamental reactive current with a phase opposite to the phase of a load current and a harmonic current are supplied from an active filter to cancel and, further, in an interrupted state, the active filter is operated as an UPS.

SOLUTION: A power active filter is connected in parallel to a harmonic producing load 2 such as a power converter, etc., and consists of an inverter 5 which outputs a compensation power, a DC power supply 4 which supplies a power in an interrupted state, and a control unit 6. In a normal state when the load 2 is connected to a power supply system, the power active filter is operated as the power active filter and the inverter 5 is driven by a control signal from the control unit 6 in accordance with a load current to compensate a fundamental reactive current in the load current and a harmonic current. On the other hand, in an interrupted state or an instantaneous voltage drop state, a switch 1 is opened in an instant and the active filter is operated as an UPS. At that time, as the switch 1 is opened, the output of the UPS is not reversely outputted to the power supply system.

